AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently Amended) An alkaline earth metal aluminate phosphor comprising: ~~containing~~ bivalent europium as an activator[[,]]; and

~~which contains~~ at least one element (e) selected from the group consisting of indium, tungsten, niobium, bismuth, molybdenum, tantalum, thallium and lead.

2. (Currently Amended) The alkaline earth metal aluminate phosphor according to Claim 1, which is obtained by a process comprising[[;]]:

a step (1-1) of firing, in a reducing atmosphere, a mixture of precursor compounds of barium and/or strontium (a), magnesium (b), aluminum (c), europium (d) and at least one element (e) selected from the group consisting of indium, tungsten, niobium, bismuth, molybdenum, tantalum, thallium and lead, respectively, and

a step (1-2) of firing, in an oxidizing atmosphere, the fired product obtained in the step (1-1).

3. (Currently Amended) The alkaline earth metal aluminate phosphor according to Claim 1, which is obtained by a process comprising[[;]]:

a step (2-1) of mixing a fired product (A) with a compound (B),

said fired product (A) comprising barium and/or strontium (a), magnesium (b), aluminum (c) and europium (d),

said compound (B) ~~being~~ comprising at least one compound selected from the group consisting of indium compounds, tungsten compounds, niobium compounds, bismuth compounds, molybdenum compounds, tantalum ~~compound~~ compounds, thallium compounds and lead compounds; and

a step (2-2) of firing, in an oxidizing atmosphere, the mixture obtained in the step (2-1) or a fired product of the mixture obtained in the step (2-1),

said step (2-2) being preceded, at least once, by firing in a reducing atmosphere.

4. (Currently Amended) The alkaline earth metal aluminate phosphor according to any one of Claims 1 to 3,

wherein the content of the at least one element (e) selected from the group consisting of indium, tungsten, niobium, bismuth, molybdenum, tantalum, thallium and lead is within ~~the~~ a range of 0.0001 to 0.01 mole per mole of the aluminum element.

5. (Currently Amended) The alkaline earth metal aluminate phosphor according to any one of Claims 1 to [[4]] 3,

wherein the alkaline earth metal aluminate phosphor containing bivalent europium as an activator is represented by the following general formula (1):

$$(Ba_{1-X}Sr_X)_{1-Y}Eu_YMgAl_{10}O_{17} \qquad (1)$$

~~in the formula~~, wherein X satisfies the relationship of $0 \leq X \leq 0.3$ and Y satisfies the relationship of $0 < Y \leq 0.2$.

6. (Currently Amended) The alkaline earth metal aluminate phosphor according to any one of Claims 1 to [[5]] 3, which has a powder whiteness of not lower than 85 as expressed in terms of W value.

7. A method of producing alkaline earth metal aluminate phosphors according to ~~any one of Claims~~ Claim 1~~, 4, 5 or 6~~, comprising:

~~which comprises~~ a step (1-1) of firing, in a reducing atmosphere, a mixture of precursor compounds of barium and/or strontium (a), magnesium (b), aluminum (c), europium (d) and at least one element (e) selected from the group consisting of indium, tungsten, niobium, bismuth, molybdenum,

tantalum, thallium and lead, respectively, or a fired product of said mixture.

8. The method of producing alkaline earth metal aluminate phosphors according to Claim 7, further comprising:

~~which comprises~~ a step (1-2) of firing, in an oxidizing atmosphere, the fired product obtained in the step (1-1) of firing in a reducing atmosphere.

9. The method of producing alkaline earth metal aluminate phosphors according to Claim 7 or 8, further comprising:

~~which comprises~~ a step (1-3) of firing in an oxidizing atmosphere in advance of the step (1-1) of firing in a reducing atmosphere.

10. (Currently Amended) A method of producing alkaline earth metal aluminate phosphors according to ~~any one of Claims~~ Claim 1 or 3 ~~1, 3, 4, 5 or~~ 6, comprising:

~~wherein the method comprises;~~

a step (2-1) of mixing a fired product (A) with a compound (B), said fired product (A) comprising barium and/or strontium (a), magnesium (b), aluminum (c) and europium (d),

said compound (B) ~~being~~ comprising at least one compound selected

from the group consisting of indium compounds, tungsten compounds, niobium compounds, bismuth compounds, molybdenum compounds, tantalum compound, thallium compounds and lead compounds; and

a step (2-2) of firing, in an oxidizing atmosphere, the mixture obtained in the step (2-1) or a fired product of the mixture obtained in the step (2-1), said step (2-2) being preceded, at least once, by firing in a reducing atmosphere.

11. The method of producing alkaline earth metal aluminate phosphors according to Claim 10, wherein said fired product (A) ~~contains~~ further comprises at least one element (e) selected from the group consisting of indium, tungsten, niobium, bismuth, molybdenum, tantalum, thallium and lead.

12. The method of producing alkaline earth metal aluminate phosphors according to Claim 10 ~~or 11~~, wherein said firing in a reducing atmosphere ~~is applied to~~ comprises firing the mixture obtained in the step (2-1).

13. The method of producing alkaline earth metal aluminate phosphors according to ~~any one of Claims~~ Claim 10 ~~to 12~~, wherein said firing in a reducing atmosphere ~~is carried out~~ comprises ~~on the occasion of~~ firing product (A) for producing the fired product (A) comprising barium and/or strontium (a),

magnesium (b), aluminum (c) and europium (d).